

Correns excluded all plants with contabescent anthers,<sup>1</sup> it is of interest that the 2d form hermaphrodite, with contabescent anthers only, should (with one possible exception) give no progeny more closely approximating the pistillate form than itself. It is furthermore noteworthy that there should be 2d form hermaphrodites among the progeny with typical anthers but with filaments long and straight, as in the 1st form, and that these should have but one type of flower, (i. e. should show no tendency toward gynomonocism.)

Neither out-door observations of wild plants nor garden and greenhouse cultures sustain Ludwig's statement that the pistillate plants of *Plantago lanceolata* flower later in the season than the hermaphrodites. After the height of the flowering season has passed, pistillate stocks seem unusually abundant because the continued growth of the unpollinated stigmas makes them unusually conspicuous. Then too, gynomonocious types often have only pistillate flowers at the tops of the spikes, and late in the season might be carelessly classified as pure pistillates.

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THE RANGE OF THE BLACK BIRCH TO BE RESTRICTED.— In all the manuals of botany and tree books where it is treated we are assured that the black birch, *Betula lenta*, often called the sweet birch and cherry birch, ranges east to Newfoundland. But in fact its eastern limit is close to the eastern boundary of New Hampshire, and a line drawn from Portland, Maine, to Montreal will mark its eastern and northern limit at least in the United States. The only places in Maine where I have seen it are in the Piscataqua valley, and the only specimens I have seen from Maine grew there. Specimens labeled as black birch are found from places farther east but the most cursory examination shows them to be incorrectly named. I have botanized in all of the Maritime Provinces and in Newfoundland, and found as I expected that there was no such tree there.

The provincial botanists having never seen the real black birch think that when they find a yellow birch (*B. lutea* L.) with black bark

<sup>1</sup> "Rein gefüllt blühende Stöcke, bei denen die Staubgefäße in Füllblätter verwandelt sind, sind [als rein weibliche Pflanzen] eingerechnet, solche mit lauter kontabeszenten Antheren jedoch nicht, obwohl sie physiologisch auch rein weiblich sind." Ber. d. d. bot. Ges. xxvi a (1908) p. 691.

they have found a black birch, and lumbermen everywhere from the Adirondacks to New Brunswick are sure that they have two birches which they are loth to believe can be age variations only. With them it is a gray or silver birch when the bark on the trunks can be removed like that on the paper birch, but when the bark is furrowed with age it is another kind; and it must be admitted that in this case there is little about the bark of a large log to indicate its relationship with a young tree of the same species. There is no commercial distinction, at least in the north, between the timber of the black and yellow birch, and birch floors are invariably called cherry birch floors but are usually if not always made of yellow birch. In fact the black birch in New England never grows to a size suitable for using in anything except in small dimensions such as chair-stuff, baby-wagon spokes, etc. The black birch is hardly a northern tree and the area covered by it in Vermont and New Hampshire is quite limited. It grows in Western Vermont and is frequent in Burlington; and it is found in the lower valleys of the Connecticut and Merrimack and in southeastern New Hampshire. Its range in the provinces of Quebec and Ontario I do not know, but it is abundant at and about Ottawa. Its range as well as its abundance in Michigan, Wisconsin, Minnesota, and Iowa is unknown. In short the two birches *B. lenta* and *B. lutea* have been so confounded by lumbermen and botanists that no dependence whatever can be placed on any published statement as to either range or frequency of the black birch in the north, northeast or northwest.—W. H. BLANCHARD, Westminster, Vermont.

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ARRHENATHERUM ELATIUS  $\beta$  TUBEROSUM IN AMERICA.—In a recent number of RHODORA (vol. 13, p. 9, Jan., 1911) the writer described and figured the subterranean organs of a grass supposed to be *Cinna arundinacea* L. During the past spring a number of specimens of these clustered corms were sent to the Department of Agriculture from various stations on the southern Atlantic coastal plain. The frequency with which these were received suggested some recently introduced species. Mr. Cooper of Decatur, Georgia, who first sent the puzzling underground organs was asked to send flowering specimens. This he kindly did, and the plant is found to be *Arrhenatherum elatius*  $\beta$  *tuberosum* (Gilib.) Halac. (*Avena tuberosa*